ration consisted almost wholly of frothy mucus. The chest was everywhere resonant on percussion. At the autopsy, on the 24th, the resonance was explained by the existence of vesicular and interlobular emphysema. Both lungs were filled with small globular masses, apparently miliary tubercles.

Dr. BACON stated that, on a microscopic examination, he was satisfied there was no tubercular cell to be found; that there were many inflammation corpuscles, and certain cells looking somewhat like those of encephaloid matter. On this latter point, however, he could not speak definitely.

Dr. DURKEE agreed with Dr. Bacon upon the non-existence of tubercle, and also upon the presence of inflammation corpuscles.

Drs. JOHN WARE and J. B. S. JACKSON considered the specimen, presented by Dr. Bowditch, to have all the common characters of miliary tubercle.

Dr. BOWDITCH thought the case interesting, as showing the importance of the microscope. He asked if it be possible that most cases of so-called acute phthisis, are, in reality, only simple inflammation of the vesicles? Finally, Dr. B. suggested that the case might be one of those called by Rokitansky *vesicular pneumonia.* (*Pathological Anatomy:* Sydenham Society Edition, vol. iv. p. 83.)

[The correctness of the microscope, as a means of diagnosis, is in question, in this case. If the granulations or bodies observed *were* tubercular, upon the grounds of evidence hitherto universally received as satisfactory, then either the microscope is not to be relied upon, finding no proper tubercular cell, or the said grounds of evidence must be renounced. It is more according to reason to consider the case, as Dr. B. has suggested, "vesicular pneumonia;" especially as Rokitansky asserts, that the "product of such inflammation, under certain conditions, partakes of the nature of tuberculous matter;"—but such *partaking* does not necessitate the discovery of the cell of tubercle by the microscope; that discovery would at least be doubtful, if not unlikely; yet the naked eye might readily pronounce these depositions tubercular granulations; hence, indeed, "the importance of the microscope" is most apparent.—SECRETARY.]

ART. V.—*Observations on the Use of Potash in the Treatment of Scurvy; with Cases.* By WILLIAM A. HAMMOND, M. D., Assist. Surg. U. S. Army.

HITHERTO, in the treatment of scurvy, little reliance has been placed by physicians in medicines, strictly so called. Fresh vegetables, lime-juice, &c., have been regarded as indispensable to the cure of this disease; and in situations where these articles could not be obtained, the unfortunate patient has generally lingered out a miserable existence till relieved from his sufferings by death.

The researches of animal chemistry have, at length, however, thrown some light upon the pathology of scurvy; and if future observers confirm the results derived from the following cases, it will not be the least boon which that science has conferred upon the practice of medicine.

New Mexico, where the following cases occurred, presents to the physician a wide field for the observation of scurvy. During eight months of the year, it is exceedingly prevalent among the troops stationed in this territory, and from the scant vegetation of the country, it is impossible to obtain those vegetables generally esteemed most beneficial in the treatment of the disease under consideration. Perhaps, however, I saw less of scurvy than any medical officer stationed in New Mexico. There did not *originate* among the troops serving at the post with me more than four or five cases, out of twelve admitted into the hospital, and those were generally of a mild nature. This immunity from the disease I ascribe to the fact, that the small stream which flows past the post (the water of which was used by the troops) contains potash in quite an appreciable quantity. From one of the springs situated among the mountains, which supply the main stream, I obtained very satisfactory evidence of the existence of potash in considerable abundance, a large precipitate of the bi-tartrate being thrown down by a solution of tartaric acid.

A small portion of some salt of potash (say the bi-tartrate, as the most agreeable), issued to the troops as a component part of the ration, would, I am confident, entirely prevent the occurrence of this affection among them.

The cases here presented are selected from about a dozen others as being those in which the disease was farther advanced before being placed under treatment.

CASE I.—William Henry, a private in company "K," 2d U. S. dragoons, admitted in hospital at Cebolleta, New Mexico, January 2, 1850, with scorbutus. Has been on detached service to Santa Fé, and while there became affected. Countenance sallow and bloated, breath extremely fetid, and gums exceedingly tender, bleeding profusely upon the slightest touch. Legs and thighs covered with the characteristic livid spots; stiffness of the knee and ankle-joints, and slight œdema of the feet. Ordered, potass. carb. grs. v, ter in die, and sol. aluminis, for mouth.

January 3. Much improved; continued medicines, 4th, 5th, 6th, and 7th; continued to improve; ordered medicines as before.

8*th*. Gums hard and firm; maculæ on legs and thighs entirely gone; complexion clear, and general health restored. Omit medicine.

9*th*. Discharged hospital, cured.

CASE II.—Augustus Miller, private 2d dragoons. Admitted into hospital May 26, 1850. Has been affected with scurvy for three weeks, at Albuquerque, New Mexico, and has been under treatment for it. Does not know what was given him. Transferred with his company to this post May 25, 1850. Says he feels a little better since his arrival here. Has some pain in right leg, at seat of a fracture which occurred some years since. Maculæ on legs and thighs very abundant, and two or three large extravasations of blood about the ankle-joints of each leg. Bowels regular. Ordered potass. carb. grs. v, ter in die.

28*th*. Spots on lower extremities disappearing; skin over fracture livid in appearance, and slight motion can be perceived at the fractured part. Continued medicine as above.

29*th*. Improving. Pain in leg much less. Motion of fractured parts slightly perceptible. Extravasation fading. Gums firm, and healthy in appearance. Committed some indiscretion in his diet to-day, in consequence of which he became affected with dysentery, which required very active treatment. Potass. carb. was omitted on the 31st, and on June 1st all signs of scurvy had disappeared. He is much debilitated from the effect of the dysentery, which still continues.

June 7. Convalescent. Continued to gain strength, and on the 12th was discharged hospital, and returned to duty.

CASE III.—Rafael Garcia, a Mexican, has been affected with scurvy for a month or more at Belin, New Mexico, where he has been on a visit to his friends. First noticed the disease at that place. Returned to this village June 5, 1850. I first saw him on the 7th. Gums exceedingly tender and spongy; teeth very loose, and sore to the touch. Has several large extravasations of blood on his legs, and myriads of the characteristic spots. On the anterior surface of the left leg is an ulcer three inches in diameter, of a pale, indolent appearance; knees stiff, flexed on the thigh, and very painful on any attempt to extend them. Ordered potass. bi-tart. ʒj, ter in die. This medicine was continued for two weeks, at the end of which time all signs of scurvy had disappeared, with the exception of the stiffness of the knees. By friction and careful passive motion for a week, the free use of these joints was completely restored. The ulcer of the leg healed perfectly without the use of any local application but ung. simp.

These cases are, I conceive, sufficient to prove the benefit to be derived from the use of the salts of potash in the treatment of scurvy. Others could be adduced; but as they are generally similar to the above in all essential particulars, I have not thought it necessary to introduce them here. In regard to the most eligible combination of potash, I am inclined to think the bitartrate preferable. It is more generally relished by patients, and, independently of this advantage, I think its purgative and diuretic properties beneficial. Both this and the carbonate, however, becoming exhausted at the post, I administered several other salts of the same article, both separately and with citric acid, without, however, perceiving that the latter article at all accelerated the cure.

No vegetables were given to the patients, for the simple reason that they could not be procured. They certainly would have proved powerful adjuncts to the potash in the treatment of the disease; but from the arid nature of the soil of the country, it is impossible to obtain them, even when in season, in sufficient quantities for the use of the sick alone.

In situations where the water has not a chemical constitution resembling that of Cebolleta, I should think it expedient to increase the quantity of potash given at each dose considerably over that indicated by the above cases. I did not, however, find it necessary to administer to any over two drachms of the bicarbonate thrice daily, and this quantity was given but to one patient.

In all, twelve cases of scurvy were treated with the salts of potash. Of these, four originated at the post, the remainder in different parts of the territory. All recovered perfectly, and in no case did lameness or other deformity remain. The minimum period of treatment was three days, the maximum twenty-one days, the average nine days and six-tenths.

In regard to the *modus operandi* of potash in scurvy, I think the hypothesis of Dr. Garrod, of London (to whom I am indebted for the idea of its curative properties), correct. He regards the disease as depending upon a deficiency of potash in the blood, and considers it essential to the perfect nutrition of the muscular fibre.* The urine of each patient whose case is here related, as also that of all in whom it was examined, exhibited, before treatment, a total absence of potash, and I noticed that, as this substance appeared in the urine, amendment commenced.

The action of this remedy must be seen, in order to be properly appreciated. The return of strength to the body, cheerfulness to the mind, and the speedy disappearance of all symptoms of the disease which ensue so quickly upon its administration, liken its influence more to that of a charm than aught else.

The importance of the discovery of the curative properties of potash in the treatment of scurvy cannot be too highly estimated. In our own country, especially, will it prove a most valuable acquisition. Scurvy has been the scourge of the numerous parties of overland emigrants to Oregon and California; more, probably, having been affected among them by this disease than all others combined, and numbers have, in consequence, left their bones upon the plains. From the facts previously mentioned in this article, I am satisfied that not only as a *remedy* is potash valuable in scurvy, but that as a *prophylactic*, also, its qualities entitle it to a high rank among that class of agents. On the score of economy, a better one could not be obtained.

The attention of physicians is invited to this subject. It is only by numerous experiments that the efficacy of this article can be established on a firm basis, and if these are made, they will, I think, have as much reason to be satisfied with its action as myself.

ART. VI.—*Some Observations and Critical Remarks upon the Arcus Senilis, as a Diagnostic Symptom of Fatty Degeneration of the Heart.*

By E. B. HASKINS, M. D., of Clarksville, Tenn.

IN the London *Lancet*, for May 11, 1850, Mr. EDWIN CANTON, Assistant Surgeon to the Royal Westminster Ophthalmic Hospital, &c., has published some interesting "Observations on the Arcus Senilis."

He claims to have demonstrated what had only been hinted at by "Dr. Schön of Hamburg," that the senile arc consists in a fatty degeneration of the cornea.

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* See American Journal of the Medical Sciences, July, 1848, pp. 200–203.